

Hradby:

1. kvartil $- 1,5IQR$
3. kvartil $+ 1,5IQR$

Skewness:

$$\frac{\frac{1}{n} \sum_{i=1}^n (X_i - \bar{X})^3}{\left[\frac{1}{n} \sum_{i=1}^n (X_i - \bar{X})^2 \right]^{\frac{3}{2}}}$$

Kurtosis:

$$\frac{\frac{1}{n} \sum_{i=1}^n (X_i - \bar{X})^4}{\left[\frac{1}{n} \sum_{i=1}^n (X_i - \bar{X})^2 \right]^2}$$

Pravdepodobnosti:

$$\frac{\hat{p} - p}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}} \sim N(0, 1)$$
$$\frac{(\hat{p}_1 - \hat{p}_2) - (p_1 - p_2)}{\sqrt{\frac{\hat{p}_1(1-\hat{p}_1)}{n_1} + \frac{\hat{p}_2(1-\hat{p}_2)}{n_2}}} \sim N(0, 1)$$

Korelácia:

$$Z = \operatorname{atanh}(\hat{\rho})$$
$$Z \sim N\left(\operatorname{atanh}(\rho), \frac{1}{n-3}\right)$$

Regresia:

$$S^2 = \frac{SS_e}{n-k}$$
$$\frac{a^T \hat{\beta} - a^T \beta}{S \sqrt{a^T (X^T X)^{-1} a}} \sim t_{n-k}$$
$$\frac{\frac{SS_{eSUBMODEL} - SS_{eMODEL}}{m}}{\frac{SS_{eMODEL}}{n-k}} \sim F_{m, n-k}$$

IS pre kontrast:

$$a^T \hat{\beta} \pm t_{n-k; 2,5\%} S \sqrt{a^T (X^T X)^{-1} a}$$

simultánny IS pre kontrast:

$$a^T \hat{\beta} \pm \sqrt{k \cdot F_{k, n-k; 5\%}} S \sqrt{a^T (X^T X)^{-1} a}$$

predikčný interval:

$$a^T \hat{\beta} \pm t_{n-k; 2,5\%} S \sqrt{1 + a^T (X^T X)^{-1} a}$$

simultánny predikčný interval:

$$a^T \hat{\beta} \pm \sqrt{k \cdot F_{k, n-k; 5\%}} S \sqrt{1 + a^T (X^T X)^{-1} a}$$